

**System and Method for Virtual Devices  
Using a Plurality of Processors**

**ABSTRACT**

A system and method is provided to allow virtual  
5 devices that use a plurality of processors in a  
multiprocessor systems, such as the BE environment. Using  
this method, a synergistic processing unit (SPU) can either  
be dedicated to performing a particular function (i.e.,  
audio, video, etc.) or a single SPU can be programmed to  
10 perform several functions on behalf of the other processors  
in the system. The application, preferably running in one  
of the primary (PU) processors, issues IOCTL commands  
through device drivers that correspond to SPUs. The kernel  
managing the primary processors responds by sending an  
15 appropriate message to the SPU that is performing the  
dedicated function. Using this method, an SPU can be  
virtualized for swapping multiple tasks or dedicated to  
performing a particular task.